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Volume 9, Number 1

Spring 2004

Fircrest faces difficulty of downsizing

Facilities Manager strives to retain top-flight maintenance despite challenges

By Phil Partington, POS staff

The professionals of the **Department of Social and Health Services' (DSHS) Fircrest School** staff are confronting the challenge of how to maintain their operations and deliver services, while downsizing a major, long-running institution with a sensitive population.

The school, located in Shoreline, north of Seattle, is scheduled to be shut down and mothballed in about two years, and several maintenance and other staff members are already departing. Mike Scott, facilities manager at Fircrest, said that keeping up the staff's morale has been the biggest problem.

"We've tried all sorts of things to counter the morale problem," said Scott, "but ultimately, there isn't a whole lot you can do. The most important thing is that we share all the information

with our staff as we receive it, so that no one feels like anything is being held back from them."

Fircrest School, a component of DSHS's Developmentally Disabled Division, also faces the issue of determining how to best mothball the facility, since the state does not have a set procedure for mothballing a school such as this. A project support unit is currently developing procedures and Consortium staff has provided a number of national examples to assist. In addition, jobs must be completed and current systems managed, despite increasing turn-overs.



Mike Scott commends the pride of his staff in spite of difficult times

"Over half of the plant operations staff is aggressively looking for other jobs," Scott said.

(Please see "Fircrest," page 6)

A maintenance manager's dream school

Rochester Primary epitomizes good planning and savvy input

By Bob MacKenzie, POS manager

Larry Quarnstrom has invested 14 years, and a lot of sweat, heart and soul into the small school district of Rochester. Rochester is located in Thurston County, Washington, approximately 20 miles south of Olympia, right off Interstate 5. Larry is the facilities manager of the district and has long

dreamed of focusing all of his 20 plus years private and public sector experience toward construction of an ultimate "dream school." He appears to have achieved his dream in the form of Rochester Primary School.

Skeptical? Check out the

school for yourself. Its maintenance/HVAC chases are tall enough to drive a five yard dump truck into them.

Maintenance staff can change every system filter in about one and one-half hours.

(Please see "Dream," page 6)

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Be sure to visit the Plant Operations Support website at www.ga.wa.gov/plant. While you're there, feel free to check out the many great resources available at the click of the mouse, including professional development announcements, Mac's Nickel ads (a listing of surplus and salvage opportunities), and much more!

Join the Consortium Listserv!

The Consortium's electronic listserv links you to various plant operations and maintenance professionals, and allows members to advertise surplus or salvage items, solve problems, answer questions and simply learn from each other's experiences. Contact your Plant Operations Support staff at plantop@ga.wa.gov to sign up!

If you're not already a member of the Consortium,...

...what are you waiting for? If you don't already have every resource at your disposal and all the money you need, then find out how the Plant Operations Support Consortium can help! Contact us at plantop@ga.wa.gov.

POS Notes



Bob MacKenzie

Hi wonderful Consortium members. What a pleasure it is supporting your varied operations. This **Shop Talk** is replete with kudos, another indicator that members are doing great things for our respective stakeholders. The high tempo pace is also reflected in the number of requests for assistance received by your trusted POS Consortium staff. The requests reached an all-time high of more than **285** being resolved in the past three months, resulting in costs savings exceeding **\$373,375** since January 1, 2004.

Thanks to lots and lots of professionals.

We have many of you to thank for those resolutions; folks like Dick Moore from Pine Lodge Pre-Release; Bob Curtiss from Francis Hadden Morgan Center; John McKay from [Coquitlam SD](#); Edwin Hood from [Abbotsford SD](#); Ron Niemi and Ron Moorehead from [Washington's Department of Transportation](#); Mike Scott from Fircrest RHL in Shoreline; Bob Sanchez from the [Washington State Public Health Lab](#); Dale Bowen of [Wishkah Valley SD](#); Denise Carron of [Washington Corrections Center for Women](#); Susan Smith from [Washington's Correctional Industries](#); Dan Singleton from [GA's Northern Cascade Gateway Center](#); Andy Golay from the [Oregon Youth Authority](#); Charlie Finch from [Alaska's Department of Cor-](#)

[rections](#); Mark Lahaie from GA's Division of State Services; Bryan Visscher from [Wenatchee SD](#); Viet La, Steve Valandra and Jim Erskine from GA's public affairs shop; Bob Johnson, Roger Wigfield and Stu Simpson, from [GA's Energy Group](#); Kathi Fyfe from the GA/EAS business office; and many more.

Sarah Magney proves she's a quick study.

Sarah joined the POS staff in October 2003 and has steadily resolved more and more requests for assistance (more than 95 to date)! Her potential is unlimited and we're deeply grateful she signed on to our "family."



Sarah Magney

Oh Canada, POS now a local call.

Yippee! Bill Low, P.E. — honorary lifetime member and superb fellow that he is — has agreed to head the Consortium's British Columbia outreach effort. Bill is the former director of facilities for [Coquitlam School District #43](#) and adds tremendous depth and local expertise for our Canadian members. Bill will be focused on increasing our international member roster. Contact Bill at (604) 319-7654, or e-mail lowmgmt@shaw.ca



Bill Low

Assessments help members establish baselines/ benchmarks.

POS staff — responding to member requests—completed two No-Fault Effectiveness Assessments of the cities of [Walla Walla](#) and [Redmond's Public Works](#) activities. The focus of the Walla Walla assess-

ment was on the department's engineering functions. The Redmond analysis centered on use of the department's facilities maintenance division.

Meanwhile, Pattie Williams, from GA's Division of Capitol Facilities, applied her nationally-recognized custodial leadership during three assessments for [The Evergreen State College](#), and [Snohomish and Stanwood-Camano School Districts](#). She also assisted in setting up a custodial training plan for a region of Washington State Department of Transportation.

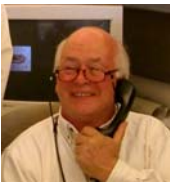


Pattie Williams

Finally, Cheryl Royal and her team of [GA/EAS](#) professionals completed a comprehensive building condition assessment of Oregon's Tri-Met facilities; while Frank Densmore continued on an exhausting evaluation of [Washington Department of Fish and Wildlife](#) properties. Whew! Now, that's making the Consortium a useful tool, eh?



Cheryl Royal



Frank Densmore

Bob



Conquering mountains of maintenance

UW professional offers insight into tackling complex tasks

By Phil Partington, POS staff

When it comes to maintenance, it's not typically a good idea to *make mountains out of molehills*. But what do you do when faced with a virtual mountain of maintenance? The University of Washington's (UW) maintenance staff faces that challenge every day, because of the enormous size and complexity of the campus. When facing this mountain, Chuck Brenner, UW outside maintenance zone lead plumber, suggests taking one handhold at a time.

"Why make yourself work harder if you can accomplish more, while possibly saving money, just by using your brain?"

Chuck Brenner, UW outside maintenance zone lead plumber

"Breaking down your tasks for better time management is one crucial component to better maintenance," Brenner said. "I also try to take ownership of everything I maintain on campus. When you invest personal interest in the things you're maintaining, you develop a better attitude and appreciation for the work that you're doing. When that happens, it becomes easier to find motivation and energy to tackle large assignments."

Brenner's innovation on the job certainly has an effect of successful maintenance at UW. For example, UW's maintenance staff was frequently repairing or replacing quick couplers, which were getting nicked and broken when the lawn was mowed. Brenner responded by framing the quick couplers with concrete donuts, so that the lawn mowers wouldn't break them. They now work with K & K concrete in Lynnwood to fabricate these donuts and sell them on the market for \$7 apiece.

Intermittent flooding at a sewer river lift station presented another maintenance challenge. The staff responded by installing a high water alarm system. Now, an alarm system is triggered if flooding is a threat, and police are notified. They, in turn, notify UW maintenance to check out the problem. UW has not experienced flooding since they installed this proactive tool two years ago.

"I'm always trying to come up with ideas to make things easier for me to take care of the campus," Brenner added. "Why make yourself work harder if you can accomplish more, while possibly saving money, just by using your brain?"

Not every labor-saving idea is extraordinary, but small innovations can make or break a maintenance operation. Because each facility operates differently and with varying amount of resources, there cannot be just one right, or wrong way of doing things. Brenner, like so many other Consor-



Jon Hooper (left), UW outside maintenance zone manager, poses with his lead plumber, Chuck Brenner (right).

tium members, is an officer of innovation—one who strives to do more with less by turning mountains of maintenance into manageable molehills.

For further information on UW's innovative utility processes, contact Chuck Brenner: (206) 616-5029, or e-mail Chuckb@u.washington.edu. Contact Phil Partington: (360) 902-7277, or e-mail ppartin@ga.wa.gov.

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Delta School District snags major environmental award

BC School District promotes 'environmental friendly' maintenance

By Sarah Magney, POS staff

One would think there is a relation between garnering major awards and being Consortium members. Maybe that's just a coincidence. [Delta School District #37](#), in British Columbia, recently demonstrated leadership in environmentally friendly maintenance by winning the Silver Reporting Award from [Natural Resources Canada \(NR Can\)](#), an organization comparable to the [Department of Energy \(DOE\)](#) and the [Environmental Protection Agency \(EPA\)](#) in the United States. Under the leadership of Rand Mackenzie, district manager of maintenance, and the previous director of facilities, Jim Alkins, Delta experienced a 26% reduction in their use of fossil fuels consumption in the last year.

"We have been very proactive over the last decade, and it's starting to pay off now," said Mackenzie. "It's certainly a team effort and requires an integrated approach to maintenance and operations."

To achieve this reduction in consumption, Delta SD professionals undertook a series of incremental upgrades to systems, including the installation of building management controls; a change to electronic lighting from T12 to T8 with electrical ballasts; and the implementation of new LED technology for their EXIT lighting. Additionally, district leaders added controls on the vending machines, so that the vending machines are not run 24 hours a day.

"The biggest change that influenced our energy consumption was installing the building management controls and programming them to set-back mode in conjunction with the security system," said Mackenzie. "We've also gone with a CO2 monitor in all gyms and put occupancy sensors in many of the classrooms. Many of



Rand Mackenzie (left) said, "Jim White (right), energy conservation officer, has been instrumental in making these energy savings possible."

these changes are all small undertakings, but they add up to significant changes in energy consumption."

In addition to the changes they have already implemented, Delta facilities and operations employees are also experimenting with new ways to conserve energy. It's an old concept, but there is a new solar wall system installed in two of the gyms, which acts as a supplemental heat source, and they are considering the possibility of installing more.

"We anticipate a three-year payback or better with solar walls, and Delta is excited to see the results of their experiment with them," said Mackenzie.

Delta faced some stiff competition for the Silver Reporting Award. Many government agencies, municipalities, and other public and corporate entities report to the NR Can as part of their "Energy Innovators Initiative."

"Our program just floated to the surface," Mackenzie said in regard to the school district's recognition.

John McKay of [Coquitlam School District #43](#) — another Canadian Consortium member — was also involved in the process that helped Delta win the award. McKay acted as a consultant to Delta, helping them work through the proper processes and bureaucracy. He brought them online with grants, including the one from [BC Hydro E-Points](#) and PowerSmart programs, and also helped to consolidate their efforts overall.

"All this hard work was done in-house," Mackenzie said. "The electrical, heating, and mechanical divisions were all involved so the staff could install the systems the way they could make them work best. Ultimately, they will all be responsible for operation of the systems, and it is important to have a sense of pride and ownership in them."

The Silver Reporting Award is a formal recognition of the admirable work being performed by our Canadian Consortium members every day. So admirable, in fact, that their expertise in energy conservation will result in Best Practices and lessons-learned from which other members may benefit.



John McKay

For further information about Delta's award-winning program, contact Rand Mackenzie: (604) 946-5088 x227, or e-mail rmackenzie@deltasd.bc.ca Contact Sarah Magney: (360) 902-7277, or e-mail smagney@ga.wa.gov

Abbotsford School District lauded for energy-related successes

Abbotsford School District shows leadership in reducing greenhouse gas emission

This article is a revised version of Abbotsford School District's annual emissions reduction report submitted to the Office of Energy Efficiency (a component of Natural Resources Canada, or NR Can). Revisions by Bob MacKenzie, POS manager.

The facilities professionals at [Abbotsford School District #34](#) in British Columbia have a lot to be "energized" about. They're the winner of the "Education Sector-School Boards" category of a major energy-related competition in Canada.

The Honorable John Efford, Minister of [Natural Resources Canada](#), recognized a number of Canadian organizations for outstanding efforts to reduce greenhouse gas emissions at a recognition ceremony held on March 30, 2004 in Ottawa.

The recipients represented every region of the country and 18 sectors of the economy. Abbotsford School District consists of 52 schools and facilities located in British Columbia's lower Fraser Valley. The buildings have about 224,000 square meters, or 2,411,116 square feet, of floor space and accommodate more than 19,000 students.

Energy saving activities prior to District 34's 2003 Voluntary Challenge and Registry (VCR) report includes preparation of an energy master plan by a third-party consultant and the

hiring of a full-time energy coordinator, paid for by BC Hydro and Natural Resources Canada. A facility upgrade affecting lighting, controls and boilers is underway. This upgrade is expected to result in an annual reduction of 866 tons of carbon dioxide emissions, a suspected cause of global warming.

"The upgrade is expected to save \$378,000 for the District," said Edwin Hood, district resource conservation manager. "This is substantial, as we manage more than \$2 million in combined gas and electric utilities costs."

In its September 2003 progress report to VCR, District 34 reported a 19.4 percent reduction in absolute greenhouse gas emissions and a 21.4 percent re-



Edwin Hood shows off a figurine of "Bob the Builder"—a cartoon character often mistaken as POS manager Bob MacKenzie's alter ego.

duction in emissions intensity in a single year. The reduction represents a 34 percent decrease in emissions compared to a business-as-usual scenario, and 13.9 percent reduction compared to a 1992/93 baseline. The district's current goal is to achieve an additional nine percent reduction in emissions.

Abbotsford SD professionals have also developed a close working relationship with [BC Hydro Power](#)

Smart, a utility program that helps customers conserve electricity. Together, the district and BC Hydro recently demonstrated energy conservation software functioning in a computer network environment, which resulted in the installation of Surveyor software on more than 2000 computers district-wide. At a cost of \$19 per computer, and through an annual savings of \$30,480 in power, the investment will pay for itself in ten months.

"We're constantly on the hunt for energy savings, both in technology and behavioral areas," said Hood. "We're gratified our efforts were recognized and hope they'll serve as a model for other Consortium members on both sides of the border."

For further information about Abbotsford successful program, contact Dale Churchill, Abbotsford SD's director of facilities: (604) 852-9494, ex. 320, or e-mail dale_churchill@sd34.bc.ca Contact Edwin Hood: (604) 852-9494 ext 343, or e-mail edwin_hood@sd34.bc.ca.

Energy Team achieves milestone

Washington state's Energy Team saves over \$100 million

By Karen Purtee, Washington Energy Team's Management Analyst



Karen Purtee

Public facilities in Washington have benefited from over \$100 million worth of energy efficiency improvement projects through [Washington state General Administration's Energy Team](#).

The team began its conservation efforts in 1986 for state agencies and community colleges, and has expanded the Energy Performance Contracting Program to include any publicly funded program. Energy efficiencies aren't limited to lights and HVAC in offices and schools. The energy engineers find savings in pumps and motors at sewage treatment facilities, LED traffic light systems, swimming pools and greenhouses, as well.

In addition to the milestone mark of \$100 million in projects, avoided costs in electricity and natural gas has an accumulated total of over \$45 million.

(Please see "Energy," page 7)



("Dream," continued from page 1)

All fiber optic and other data cables are color coded and tactically located to affect easy and quick modification per building wing. Teachers and students can tack items to their walls at all classroom levels, thanks to a tackable wall service, consisting of vinyl wall covering over sheet rock, installed throughout. The hallways speak of high-end, first class construction materials and embody durability. Every aspect of the 48,729 square foot school was built with quality maintenance in mind. If you were one of the 22 teachers, one counselor and seven instructional assistants within, you'd probably say the designer thought about your needs before all others. To be truthful, the school is a dream in more than a few categories.



Larry Quarnstrom unveils his dream school

Larry, in true selfless form, credits Erickson/McGovern Architects, the designer, and Gary Larson of GALCo Engineering Services, the project manager, for the school's top rating by maintenance staff. Nonetheless, Larry's input was considered throughout the project and his experience has been built into every cranny of the school.

"It's rare to see a school constructed in such a way as to incorporate teaching staff, administration, students and maintenance feedback alike," said Quarnstrom. "This is a success story that's earning its accolades every day it serves these young citizens in a safe, productive and cost-efficient environment."

The total project construction cost was approximately \$6,750,00.00 with less than one percent change orders.

Larson's vast experience in school construction ensured the entire project was brought in on time, within budget. He served as the Director of Construction & Design for [North Thurston Public Schools](#) for 21 years before retiring in 2000. Since then, Larson has been offering full time project management services to Washington state public schools.

The school was completed in 2002 and currently serves approximately 450 students in grades K-2. The school's average class size is 27-28 students. Rochester is a beautiful, country, bedroom community with tremendous recreational, cultural, and social activities readily available

within the local and surrounding areas. The primary school stands as a testament to the support rendered by the local community and a team of moti-

vated experts able to make great things happen.

It's a best practice of the tenth degree and we applaud Larry and the Rochester SD administration for making the school known to the Consortium.

For more information about Rochester School District, contact Larry Quarnstrom: (360) 273-6940, or e-mail at maint@cco.net. Contact Bob MacKenzie: (360) 902-7257, or e-mail bmacken@ga.wa.gov.

("Fircrest," continued from page 1)

"We've been trying to develop incentive packages to offer the plant operations staff to address our retention issues. With the proposed closure of the school, recruiting highly qualified journeyman for all the trades becomes exceedingly difficult. For example, we just lost a plumber, so we are now faced with recruiting for a temporary position that pays considerably less than scale and may not last any longer than two years.

"Because the position is temporary, professionals are going to be reluctant to apply without increased financial incentives," Scott adds.

Scott's plant operations budget is decreasing, even as many systems may require upgrades, or overhauls. Scott explains that temporary employees do not have the opportunities to learn all the systems of a complex institution such as Fircrest. "One employee, even after two years on the job, still has only learned about two-thirds of our system, but he still doesn't have everything down."

Fircrest is located on the site of a 1940-era Naval Hospital. Its 88 acres of grounds and the 55 buildings currently in use pre-

sent a challenge in the best of times. The proposed drawdown just adds to the depth of them.

"Despite these challenges, Fircrest's facilities crews continue to hang on to their pride in their work," Scott points out.

"They have a lot of pride concerning their accomplishments in reducing the deferred maintenance backlog at this facility and setting new standards," said Scott. "Their attitude is that they aren't going to let all these facilities fall apart. Despite some problems with morale, they never quit. The plant operations portion of Fircrest has won five Governor Blue Book Awards. We've really come a long way in bringing value to maintenance."

"The guys here take a lot of pride in the fact that we do everything, including producing steam, keeping up the maintenance on the system, and rebuilding our own stuff. We're an A-to-Z shop," said Jerry Monroe, stationary engineer 3 and chief engineer at Fircrest's steam plant.



Jerry Monroe examines drawings of Fircrest facilities

(Please see "Downsizing," page 8)

(Energy," continued from page 5)



Washington state's Energy Team models top-of-the-line energy savings and conservation

The avoided cost represents reductions of over 5 million therms of natural gas and 135 million kilowatt hours. The 135 million kilowatts of electricity equals

what is needed to power 10,000 average homes in the Northwest

Simply turning equipment and lights off when they aren't needed can reduce building electric use by as much as ten percent.

While saving utility dollars, the program also pulls in grants and rebates from utilities to add to the public coffers. The total for this bonus money is over \$17 million.

"We strive to improve building energy performance and reduce operating costs without sacrificing occupant comfort or impacting services," said Clint Loughheed, Energy

Team manager. "Our team of engineers and private industry partners are committed to helping building owners create high performance buildings, while at the same time improving their bottom line."

The environmental impact of reducing energy use is of equal importance to the Energy Team. The 135 million kilowatts of avoided costs equates to removing 194,000 tons of CO₂. In other words, it is the same as removing 25,885 cars from the road, or planting 52,949 acres of trees.

To find out more about the Energy Savings Performance Contracting program, visit the web site at www.ga.wa.gov/eas/energy Contact Karen Purtee: (360) 902-7194, or e-mail kpurtee@ga.wa.gov

Plant Operations Support Consortium Honor Roll

New members appear in purple and renewing members are listed in red type. Welcome and thanks on behalf of the Consortium!

School Districts

Abbotsford, BC
Bridgeport
Brinnon
Cascade
Centralia
Chehalis
Clover Park
Columbia-Burbank
Coquitlam, BC
Coupeville
Dayton
Delta, BC
East Valley Spokane
Easton
Eatonville
Edmonds
Elma
Enumclaw
ESD 101
Federal Way
Highline
Hoquiam
Issaquah
Ketchikan, AK
Kittitas

LaCrosse
Marysville
Moses Lake
Mount Baker
Mukilteo
North River
North Thurston
Northshore
Oak Harbor
Ocean Beach
Ocosta
Okanogan Skaha, BC
Orondo
Peninsula
Quilcene
Quillayute Valley
Quinault Lake
Rochester
Sequim
Soap Lake
South Kitsap
Snohomish
Snoqualmie Valley
Stanwood-Camano
Sumner
Surrey, BC
Thorpe

Vancouver
Wenatchee
White River
Wishkah Valley
Yelm

Universities/Colleges

Bellevue CC
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Clark College
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Highline CC
Olympic CC
Renton TC
Evergreen State College
Univ. of Washington
Washington State University

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Port of Longview
Port of Olympia
Port of Seattle, Sea-Tac Airport
Port of Sunnyside

Municipalities

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City of Marysville
City of Redmond
City of Snohomish
City of Tukwila
City of Tumwater
Clark County
Cowlitz County
Jefferson County
King County Housing Authority
King County Metro South
King County Wastewater Treatment Division
Westpoint
Kitsap County
Lakehaven Utility District
Lewis County
Pierce County
Tacoma-Pierce City Health Dept
Town of Eatonville
Whatcom County

Canada
Attorney General, BC
BC Building Corp
Reg. Municipality of Peel, ON

States

Alaska
Oregon Dept. of Admin. Svcs.
Oregon Youth Authority

Washington State Agencies

Corrections
Ecology
Fish and Wildlife
General Administration
Health
Information Services
Licensing
Liquor Control Board
Military
Natural Resources
Parks & Recreation
School for the Blind
School for the Deaf
Social & Health Services
Transportation
Veterans Affairs
Washington State Patrol

Check out the Plant Ops website for quick links to Consortium member websites—<http://www.ga.wa.gov/plant>

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***("Downsizing," continued from
page 6)***

"They also take pride in the fact that we've saved the state money by doing everything in-house. I've got a crew of seven people to run the steam plant and the system, whereas, most like-sized DSHS facilities have more staff and the assignments are segmented in different shops. Here, it all falls under one shop."

The staff at Fircrest School represents the very best of public service commitment. Whether the drawdown continues as planned, or is interrupted, they'll still be on the job and making good things happen.

For further information about Fircrest School, please contact Mike Scott, facilities manager at the school, at (206) 361-3123, or by e-mail at scottmf@dshs.wa.gov. Contact Phil Partington, POS staff, at (360) 902-7277, or by e-mail at ppartin@ga.wa.gov.



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